

ABSTRACT

A method for determining the shape of a scroll cage for a forward-curved centrifugal blower wheel in a blower housing having a blower cut-off end including determining the blower wheel dimensions, determining the blower wheel clearance, determining the distance from the center of the blower wheel to the discharge point of the scroll cage at the tangential point of the scroll cage and the blower housing, selecting a diffusing angle, calculating a development angle and plotting the scroll cage profile in polar coordinates. The method can include iteratively adjusting the diffusing angle and re-plotting the scroll cage profile and running simulations to determine the optimum profile.